

MARKED UP VERSION OF AMENDMENTSIn the Claims:

Claims 15, 16, 17, 18, and 20 have been amended as follows:

15. (Amended) A process for making a semiconductor device according to claim [14] 29, wherein the forming of the barrier film comprises the following substeps:

vapor depositing a metal halide on the cleaned heated substrate surface at a temperature of 500 to 700°C, in a vacuum having a background pressure of less than approximately 10^{-11} Torr, and wherein the metal halide deposition is conducted at a rate permitting the metal halide vapor to react with the substrate surface to form a monolayer of metal atoms selected from barium atoms, strontium atoms, and cesium atoms, singly or in combinations thereof, on said surface of said substrate; and

continuing, after forming the monolayer, the vapor depositing of the metal halide to form a metal halide layer regime upon the monolayer until the desired barrier film thickness has been achieved.

16. (Amended) A process of making a semiconductor device according to claim [14] 29, wherein the forming of the single crystal transition metal on the barrier film comprises depositing a transition metal on the barrier film concurrent with heating the substrate and barrier film surface to a temperature effective to cause the transition metal to assume a monocrystalline structure.

17. (Amended) A process for making a semiconductor device according to claim [14] 29, wherein the forming of the single crystal transition metal on the barrier film comprises the substeps of depositing a transition metal on the barrier film at a temperature below which the metal forms with a single crystal structure, and then annealing the resulting metallized substrate at a temperature effective to cause the transition metal to assume a monocrystalline structure.

18. (Amended) A process for making a semiconductor device according to claim [14] 29, wherein the forming of the single crystal transition metal on the barrier film comprises depositing a transition metal on the barrier film concurrent with heating the substrate and barrier film surface to approximately 375 C or higher.

20. (Amended) A process for making a semiconductor device according to claim [14] 29, wherein the forming of the single crystal transition metal on the barrier film comprises the substeps of depositing a transition metal on the barrier film at a temperature below 375 C, and then annealing the resulting metallized substrate at a temperature of 375 C or higher.

REMARKS

This Substitute Amendment replaces the Amendment filed on August 27, 2002 (faxed on August 16, 2002). As pointed out by Examiner Nguyen in a telephone conference with the undersigned on September 18, 2002, the Amendment filed on August 27, 2002 erroneously amended claims previously cancelled in the Preliminary Amendment filed on May 9, 2001. The error was inadvertent, and is corrected herein.


Claims 15-21 and 29-36 are now pending in the case. Claim 29, an exact duplicate of previously cancelled claim 14, has been added as a new independent claim. Claims 15, 16, 17, 18, and 20 have been amended to depend from new claim 29. Claims 30-36, respectively exact duplicates of previously cancelled claims 22-28, have been added as new dependent claims depending from new claim 29.

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In view of the foregoing, the application is now believed to be in condition for allowance. An early and favorable reconsideration of claims 15-21 and 29-36 is earnestly solicited.

Respectfully submitted,



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